Ann. Natal Mus. Vol. 38 Pages 133–136 Pietermaritzburg November, 1997

The first endemic species of *Meoneura* Rondani (Diptera: Carnidae) to South Africa

by

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ABSTRACT

Meoneura australis sp. n. is described from a single male from the Western Cape (South Africa), and the species to which it is related are discussed. Comments about the biology and distribution of *Meoneura* are made.

INTRODUCTION

Having discovered a single male of an undescribed *Meoneura* species in the Diptera collection of the Natal Museum, Dr. D. A. Barraclough kindly asked me to describe it. This is the second record of the genus from southern Africa, the first being *M. prima* (Becker) from Natal (Barraclough 1994: 21). Elsewhere in the Afrotropical Region three species have been described from Nigeria (Deeming 1976), a single species recorded from the Cape Verde Islands (Barraclough 1994) and an unidentified species recorded from Gough Island (Oldroyd 1958: 79). The Gough Island record is based upon a single female in the Natural History Museum, London (BMNH) labelled: 'Penguin rookery in small cave, Sophora Glen, 22.i.1956, M. Holgate A28'. This and another single female in BMNH labelled: 'S. Africa, Grahamstown, 29.x.1958, B. Stuckenberg', both resemble *M. prima* (Becker) and have a single long, strong, posteroventral bristle on the fore femur and the frontal triangle only extending half the distance between the anterior ocellus and the fore margin of the frons. The latter character differs in the male of the new species. Apart from the Natal record, the most southerly African record of *M. prima* known to me is a male in BMNH labelled: 'Sudan, Helwan, iii.1923, S. Hirst'.

The genus *Meoneura* is essentially holarctic, very few species being known elsewhere. Seemingly the paucity of records from the tropics cannot be attributed to the genus being overlooked, as of recent years much trapping of different kinds has been done, which would have revealed specimens had they been present. There are numerous records of adult rearings from bird nests, but other records include chicken, pig and cow dung, recently-harvested wheat, stored tobacco, salted fish, fungus and even a damaged *Sarcophaga* pupa (Ferrar 1987: 101). Ferrar believes the larvae to be saprophagous. The cephalopharyngeal skeleton of a third instar larva of *M. obscurella* Fallén reproduced (*loc. cit.* p. 607) from Engel's 1930 paper shows the pharyngeal sclerite to have a well-developed sieve mechanism, which supports Ferrar's hypothesis. I have found adults of *M. lamellata* Collin and *M. bicuspidata* Collin to be adundant on thistles (*Circium* sp.) in South Wales (Deeming 1995: 61),

congregated not on inflorescences, but on stems and leaves, and I have recently collected two undescribed species on elephant dung at the Yankari Game Reserve in Nigeria.

Meoneura australis sp. n. ♂

Figs 1–3

A black, lightly greyish-dusted species with knob of haltere creamy white, frons with an orange band occupying anterior half, the lunula, face, parafacialia, cheek and second antennal segment dirty orange, and wing faintly brownish tinged.

Male:

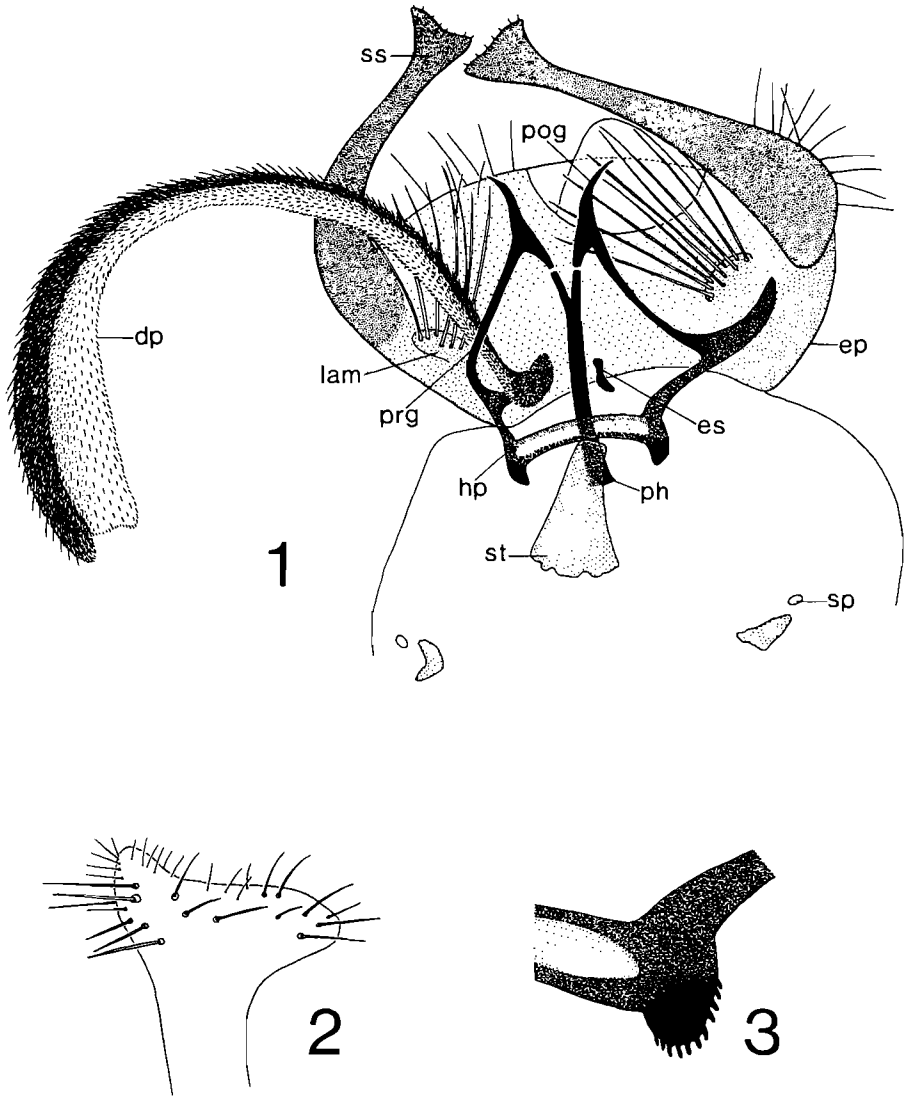
Postocellar setae parallel, long, 5 times as long as distance separating their bases; frontal triangle shining on all but ocellar prominence, extending three-quarters distance from anterior ocellus to fore margin of frons, anteriorly forming a distinct point that is bounded on either side by a strong inclinate seta; upper orbits dusted, the lower shining; eye sparsely short haired. Mesonotum and scutellum uniformly dusted, subshining; 3 strong postsutural dorsocentral bristles, the most anterior of which is close to the suture, at which point the irregular rows of intradorsocentral setulae are 6–8, diminishing to 4 at the level of the most posterior dorsocentral; a pair of prescutellar acrostichals present, these as long as the most anterior dorsocentrals. Wing veins brown, but M_{1+2} weak and almost colourless; distance separating crossveins a little greater than the individual length of either. Hind femur at three-quarters of its length with an anteroventral bristle that is as long as the greatest femoral depth; fore femur with a yet stronger posteroventral bristle at three-quarters of its length. Sternites lacking outstanding bristles; surstylus (Fig. 1) long, apically somewhat triangular in shape (Fig. 2); lamella weakly sclerotised and bearing yellow setae that are shorter than the surstylus is long; hypandrium (Fig. 3) with its anterolateral corners prominent and bearing numerous, short, tooth-like projections; gonites fused, black and heavily sclerotised, the strap-like pregonite fused both with the arm of the hypandrium at mid-length and with the claw-shaped postgonite, the cuticle enclosed by these structures completely transparent.

Length of wing 1.8 mm.

Female unknown.

Holotype ♂: SOUTH AFRICA: W. Cape, 5 km W. of Clanwilliam, 32°12'S 18°52'E, 270 m, rocky area, flowers, 30.viii.1995, J. & A. Londt (Natal Museum). Although not stated on the label, this specimen was collected from hyrax (probably *Procavia capensis*) excrement, together with various Camillidae.

Affinities: Three other species share with *M. australis* the character of a long, narrow-shafted surstylus, also having three pairs of dorsocentral bristles and the frons with an anterior orange band. These are *M. prima* [(Becker, 1903: 192) (syn. *seducta* Collin, 1937: 250 and under which name it is better known)], which has a wide holarctic distribution (Sabrosky, 1959: 23; Barraclough, 1994: 21); M. *baluchistani* Duda, 1936: 337, described from Pakistan and also present in Yemen (Deeming, in press); and *M. paraseducta* Papp, 1976: 379 (figured p. 377) from Mongolia. In the



Figs 1–3. *Meoneura australis* sp. n., holotype male. 1. Tip of abdomen from beneath and slightly to the right. 2. Chaetotaxy of outer surface of apex of left surstylus. 3. Anterolateral shoulder of hypandrium. Abbreviations: **dp** distiphallus, **ep** epandrium, **es** ejaculatory sclerite, **hp** hypandrium, **lam** lamella; **ph** phallapodeme; **pog** postgonite, **prg** pregonite, **sp** spiracle, **ss** surstylus, **st** sternite 5.

former two species the setae borne on the male genital lamella are very much longer than the surstylus. Figures of the male genitalia of *seducta* are given by Collin (1937: 251), Sabrosky (1959: 21) and (Lyneborg 1969: 43), and of *baluchistani* by Deeming (1976: 32). In *paraseducta* sternite 5 bears a distinctive pair of bristles, the length of which approaches that of the surstylus. None of these species has the apical part of the surstyli of the same shape as in the new species, and all have the frontal triangle

shorter and apically more obtuse, in *prima* and *baluchistani* it extending only half the distance from the anterior ocellus to the fore margin of the frons, and in *paraseducta* it being described as 'terminating in an obtuse apex in anterior third of frons'. Of the four species, *M. paraseducta* is the only one with two strong posteroventral bristles on the fore femur.

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Date received: 17 December 1996